

Date: Monday, 24/12/2007 12:19:21 PM
User: Linda Lacelle

Process Sheet

Customer : CC-DAR01 Dart Aerospace Ltd. Drawing Name : D206-642-612
Job Number : 36160
Estimate Number : 10804
P.O. Number :
This Issue : 24/12/2007 S.O. No. :
Prsht Rev. : NC
First Issue : 05/12/2007 Type : LANDING GEAR
Previous Run : 36159
Written By :
Checked & Approved By :
Comment :

Part Number : D206642612
Drawing Number : REWORK/ECN 1070
Project Number :
Drawing Revision :
Material :
Due Date : 12/12/2007 Qty: 1 Um: Each

Additional Product

Job Number:

**DART**

TRANSPORT CANADA APPROVAL # 09-89

TEL: 1-613-632-3336
FAX: 1-613-632-4443

P/N	D206-642-612	CHG	CHG002
DESC	Float Skidtube RH	STC	SH98-4
LOT	B31963	STC	SA00475SE
TEL	Bell 206A/B	STC	

PATENT # 5735483
CANADA FOREIGN PATENTS PENDING

MADE IN CANADA

Seq. #: Machine Or Operation:

Description

1.0

D206642612

Skidtube RH



Comment: Qty: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)
Skidtube LH
ORIGINAL B/N 31963
FROM OFFSHORE

2.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

INSTALL
PLUG
HAND

- a) Drill out existing mid float welded spacers. 3 spacers per skidtube
b) Fill drilled out holes with weld. 6 holes total
c) Drill new mid float bag holes (on an angle) per D3288 Rev F. 12
places per skidtube

M 106330

(welded)

M 105671

6051-76

DP 8-1-16

BE 08/02/05

(plus)

3.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

ID 0802-0501

4.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

6 08/02/05 (x)

5.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

REMOVE ALL EXISTING PARTS
SAND LIGHTLY FOR RE-PAINT

DP
08-02-07 (x1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 24/12/2007 12:19:21 PM
User: Linda Lacelle

Process Sheet

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Drawing Name: D206-642-612

Job Number: 36160

Part Number: D206642612

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION

7.0

POWDER COATING

POWDER COATING



m/06379



Comment: POWDER COATING

RE-PAINT PER QSI005

FL 08/02/08

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

M-L 08/02/11

9.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install D3683-1 inserts. Plug inserts with MS27039C1-05 (or AN3C3A bolt) and AN960C10L washers. 12 places per skidtube.
e) On the aft cap, replace the NAS1515H3L with D3672-1 washers. 2 places

m-l 1- D3536-35 B36609 Gasket

m-l 66 - AW3C4A M107008 Bolt

m-l 66 - AW960C10L M107008 washer

m-l 1 - D3536-41 B31997 Gasket

m-l 1 - D3536-21 B31995 Gasket

INSTALL ALL EXISTING PARTS (WEARPLATES ETC)

PER DRWG D3288 REV.F

INDICATE ANY NEW PARTS USED:

m-l 1 - 3536-15 B33964 Gasket

m-l 2 - D3672-1 B334476 phenolic washer

m-l 08/02/11

10.0

D36831

INSERT



Comment: Qty.: 12.0000 Each(s)/Unit Total: 12.0000 Each(s)
INSERT

B36319 m-l

11.0

MS27039C105

SCREW



Comment: Qty.: 12.0000 Each(s)/Unit Total: 12.0000 Each(s)

SCREW

(OR AN3C3A)

M107008 m-l 08/02/11

W/O:		WORK ORDER CHANGES					
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QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 24/12/2007 12:19:21 PM
User: Linda Lacelle

Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: D206-642-612

Job Number: 36160

Part Number: D206642612

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

AN960C10L

washer



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)
washer

M107008

13.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/01/2

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

CHANGE THE FOLLOWING IN KITS:

Changes to "pick" kit

- a) REMOVE NAS1515H5 washer replace with D3672-5. Qty 16 M101925 14X
- b) REMOVE NAS1515H5L washer replace with D3672-7. Qty 8 M101925 8P
- c) REMOVE NAS1515H4L washer replace with D3672-3. Qty 24 M104542 8X M1020 29 16X
- d) ADD MS21250-03004 bolt. Qty 6
- e) REMOVE NAS1515H3L washer replace with D3672-1. Qty 18 M19565 18X
- f) ADD AN960JD10 washer. Qty 6

15.0

D36725

PHENOLIC WASHER



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)
PHENOLIC WASHER

335521

16.0

D36727

PHENOLIC WASHER



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)
PHENOLIC WASHER

35522

17.0

D36723

PHENOLIC WASHER



Comment: Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)
PHENOLIC WASHER

36471

08/2/13 (1)

B36160

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes (No) DQA: D Date: 28/02/14
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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User: Linda Lacelle

Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: D206-642-612

Job Number: 36160

Part Number: D206642612

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

D36721

PHENOLIC WASHER



Comment: Qty.: 18.0000 Each(s)/Unit Total: 18.0000 Each(s)
PHENOLIC WASHER

34470

PC

19.0

MS21250 03004

HIGH STEEL BOLT



Comment: Qty.: 6.0000 Each(s)/Unit Total: 6.0000 Each(s)
HIGH STEEL BOLT

M10 6277

PC

20.0

AN960JD10

Washer



Comment: Qty.: 6.0000 Each(s)/Unit Total: 6.0000 Each(s)
Washer

M106167

PC 8/2/13

21.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

PC 08/02/13 (1)

22.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Identify and pack for shipping as per PPP D206-642-611
USING NEW B/N
CHG 003
Location: _____
PPP Rev: _____

C

8/2/13 SO (12)

23.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

PC 08/02/14 (1)

Job Completion



min 2008/2/14 (1)
U

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

L Lacelle

From: Peter Hum [phum@dartaero.com]
Sent: December 21, 2007 11:33 AM
To: 'L Lacelle'
Subject: RE: ECN1070 / 1063 for change record #003

Hi Linda,

I am writing this re-work with the assumption that the float skidtubes are painted and basically complete per the old CHG

Therefore to re-work these to CHG 003

- a) Drill out existing mid float welded spacers. 3 spacers per skidtube
- b) Fill drilled out holes with weld. 6 holes total
- c) Drill new mid float bag holes (on an angle) per D3288 Rev F. 12 places per skidtube
- d) Install D3683-1 inserts. Plug inserts with MS27039C1-05 (or AN3C3A bolt) and AN960C10L washers. 12 places per skidtube.
- e) On the aft cap, replace the NAS1515H3L with D3672-1 washers. 2 places

Changes to "pick" kit

- a) REMOVE NAS1515H5 washer replace with D3672-5. Qty 16
- b) REMOVE NAS1515H5L washer replace with D3672-7. Qty 8
- c) REMOVE NAS1515H4L washer replace with D3672-3. Qty 24
- d) ADD MS21250-03004 bolt. Qty 6
- e) REMOVE NAS1515H3L washer replace with D3672-1. Qty 18
- f) ADD AN960JD10 washer. Qty 6

For reference please see D3288 Rev. F and Installation Instructions D206-642 Rev. L

Peter

-----Original Message-----

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: December 20, 2007 2:46 PM
To: Peter Hum (Peter Hum)
Subject: FW: ECN1070 / 1063 for change record #003

Peter,
Could you please let me know what the rework scheme will be...642-641's returned from airlog/offshore

Thx
LL

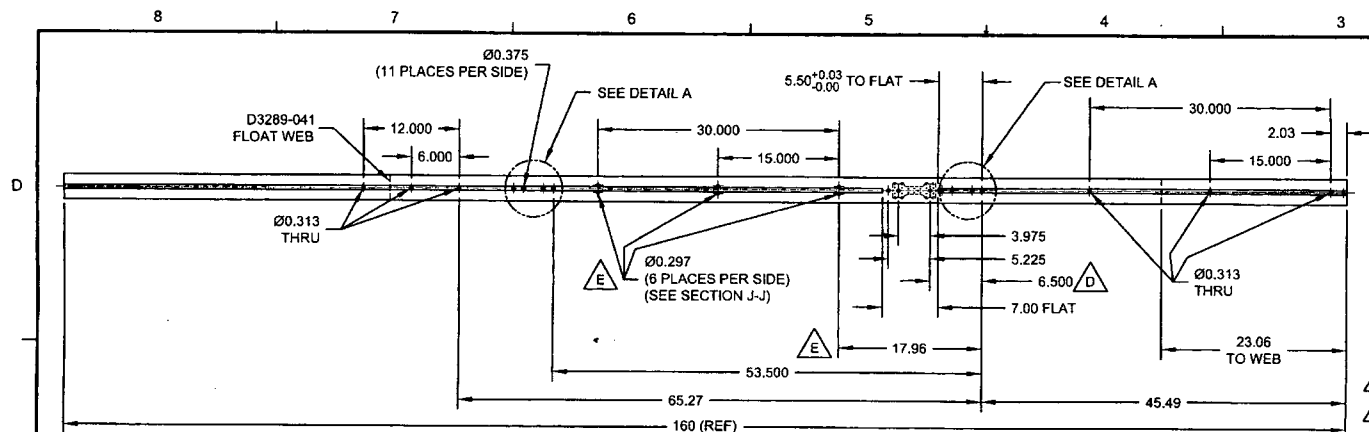
-----Original Message-----

From: Kim Johnston [mailto:kjohnston@dartaero.com]
Sent: December 20, 2007 1:50 PM
To: Linda Lacelle (E-mail)
Subject: ECN1070 / 1063 for change record #003

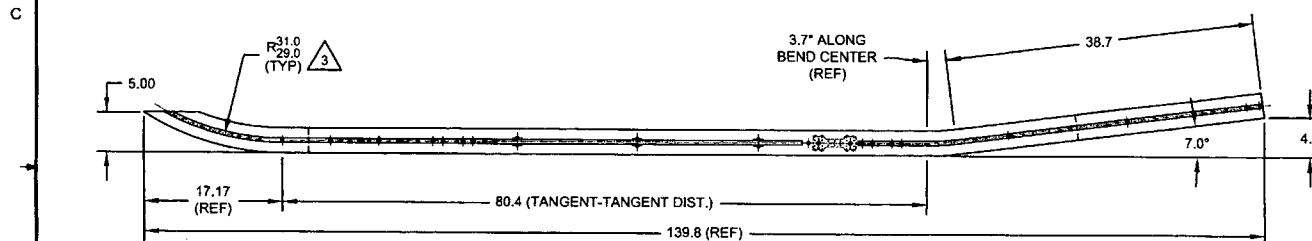
Linda,

All four skidtubes need to be reworked, B35179, 35180, 36159, 36160 per ecn 1070

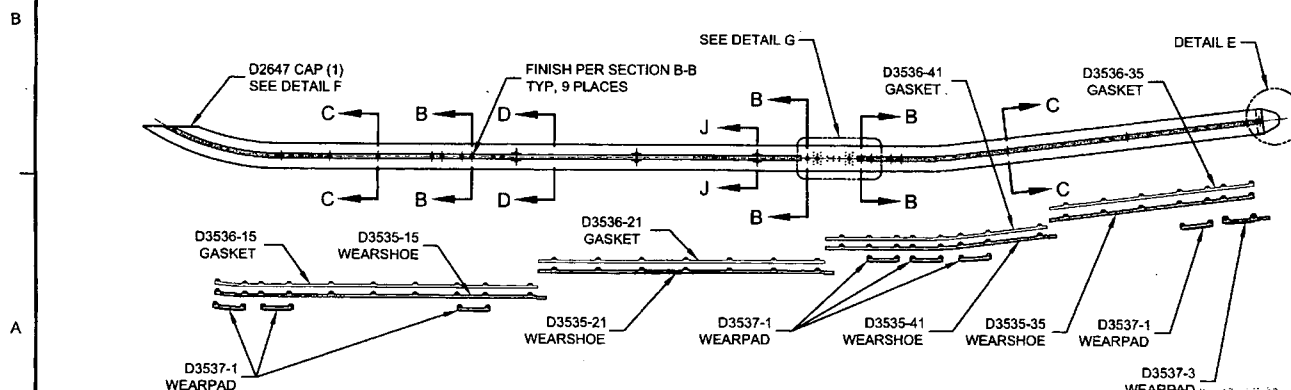
Kim Johnston
Dart Aerospace Ltd.
Engineering Clerk
Document Control
Email: kjohnston@dartaero.com
717 612 622 5000



D3288-041 DRILLING/WEB ASSEMBLY DETAIL



D3288-041 BENDING DETAIL



D3288-041 WELDING DETAIL/SKIDTUBE ASSEMBLY

Qty	Part Number	Description
X	D3288-041	SKIDTUBE ASSEMBLY
1	D2600-1-240	EXTRUSION
1	D2646	AFT CAP
1	D2647	CAP
9	D2649	CROSS BOLT SPACER
2	D3275-1	CROSS BOLT SPACER
2	D3286-1	DOUBLER
2	D3286-3	SPACER
1	D3289-041	FLOAT WEB
1	D3413-1	RING
1	D3415-041	NUT PLATE
1	D3535-15	WEARSHOE
1	D3535-21	WEARSHOE
1	D3535-35	WEARSHOE
1	D3535-41	WEARSHOE
1	D3536-15	GASKET
1	D3536-21	GASKET
1	D3536-35	GASKET
1	D3536-41	GASKET
7	D3537-1	WEARPAD
1	D3537-3	WEARPAD
12	D3683-1	INSERT
64	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
66	AN3C4A	BOLT
1	AN4C5A	BOLT
1	AN960C416	WASHER
78	AN960C10L	WASHER
2	CR264SS3-3	RIVET
2	CR3212-4-03	RIVET
52	CR3212-4-04	RIVET
12	MS27039C1-05	SCREW (or AN3C3A BOLT)
2	NAS1515H3L	WASHER

GENERAL NOTES:

- FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- BOND D3289-041 FLOAT WEB INTO D3288-1 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
- ALL HOLES DRILLED ON CENTERLINES.
- DRILL Ø0.297 HOLES FOR D3683-1 INSERTS BEFORE FINISH. INSTALL D3683-1 INSERTS AFTER FINISH.
- DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3288-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX-241/291.
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- WELDING: PER DART QSI 004.

F	SUBSTITUTE FLOAT BAG INSERT W/ SPEC CTRL DWG WAS ALS7-1032-130; IS NOW D3683-1	DC	07.11.21
E	MID-FLOAT HOLES WERE MOVED 2.00" FWD AND ROTATED INBOARD AND OUTBOARD BY 17" INSERTS ARE NOW INSTALLED AT THESE LOCATIONS	MB	07.09.14
D	DIMENSIONS ADDED	DC	07.06.04
C	NEW INSERTS, SS WEARSHOES AND GASKETS	PH	06.12.19
B	CHANGE INSERTS	CP	05.03.18
A	NEW ISSUE	CP	04.05.17
REV.	DESCRIPTION	BY	DATE
DESIGN	DP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DL		
CHECKED	PL	DRAWING NO.	REV. F
MFG. APPR.	PL	D3288	SHEET 1 OF 2
APPROVED	PL	TITLE	SCALE
DE APPR.	PL	SKIDTUBE ASSEMBLY	1:15
DATE	07.11.21	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

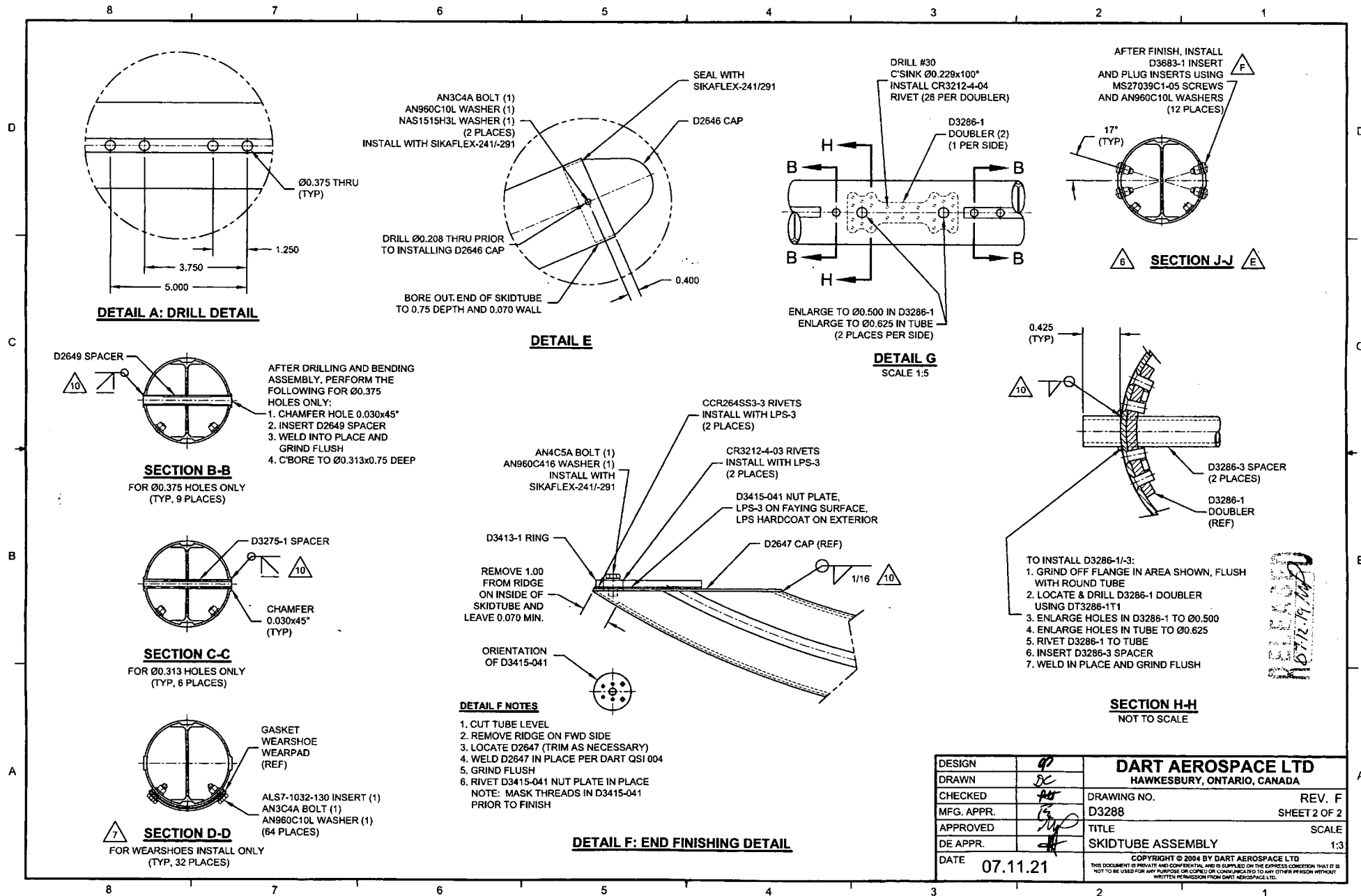
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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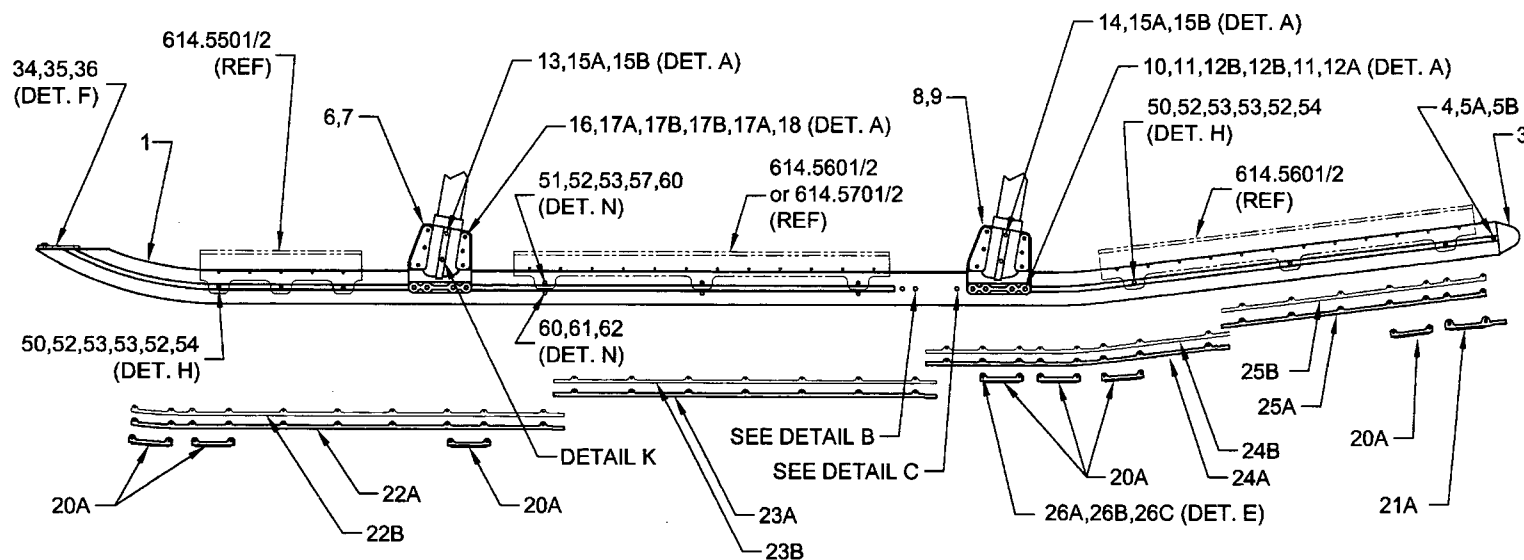
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QA: N/C Closed: _____ Date: _____

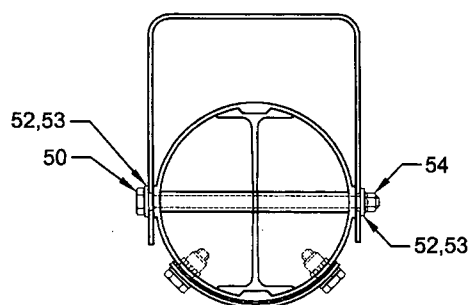
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

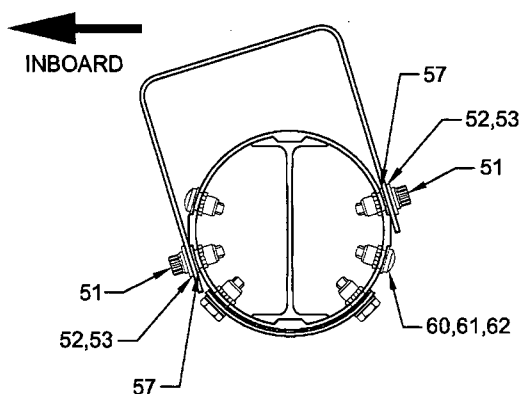
206 A/B FLOAT SKIDTUBES (TRI-BAG FLOATS) (D206-642-611/-612/-613/-614)



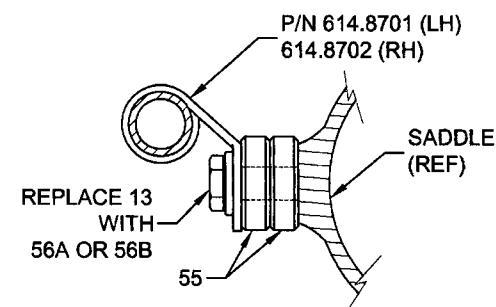
DETAIL H



DETAIL N



DETAIL K



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Revision: **L**
Date: 07.10.25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

50

Date: Monday, 1/7/2008 8:48:51 AM
User: Kim Johnston

Process Sheet

Customer	: CC-DAR01 Dart Aerospace Ltd.	Drawing Name	: D206-642-612
Job Number	: 36160		
Estimate Number	: 10804		
P.O. Number	:	Part Number	: D206642612
This Issue	: 1/7/2008	S.O. No.	:
Prsht Rev.	: NC	Drawing Number	: REWORK/ECN 1070
First Issue	: 12/5/2007	Project Number	:
Previous Run	: 36159	Drawing Revision	:
		Material	:
Written By	:	Due Date	: 12/12/2007
Checked & Approved By	:	Qty:	1 Um: Each
Comment	:		

Additional Product

Job Number:

*Bluehls 08.01.10*

Seq. #:	Machine Or Operation:	Description :
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20.0	AN960JD10	Washer
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Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)
Washer

21.0	QC4	INSPECT 100% KITS FOR COMPLETENESS
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Comment: INSPECT 100% KITS FOR COMPLETENESS

22.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1
Identify and pack for shipping as per PPP D206-642-611
USING NEW B/N
CHG 003
Location: _____
PPP Rev: _____

23.0	QC21	FINAL INSPECTION/W/O RELEASE
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Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



REFERENCE ONLY